

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A transmission power control method for controlling the transmission power of downlink signals from base stations to a mobile terminal in a mobile communications system, comprising the steps of:

~~during soft handover, sending notification, from said mobile terminal to said base stations, of the ID of the base station that is transmitting said downlink signal with the best downlink reception quality;~~

~~stopping transmission of user data to the mobile terminal from base stations that do not correspond to the base station ID notified by the mobile terminal;~~

~~estimating, at the mobile terminal, which base stations have a likelihood of transmitting user data;~~

selecting, at the mobile terminal, a first base station, said first base station transmitting user data in a downlink signal with a preferred reception quality;

using determining, at the mobile terminal, transmission power of the downlink signals from these other base stations not selected by said mobile terminal, said other base stations transmitting user data in said downlink signals to the mobile terminal after the first base station is

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

selected~~that have a likelihood of transmitting user data, to decide, at the mobile terminal,~~
~~whether the transmission power of these base stations is excessive or insufficient;~~
~~sending information, from the mobile terminal to the other base stations, to modify the~~
~~transmission power of the downlink signals of the other base stations~~~~these base station, relating~~
~~to excess or deficiency of their transmission power; and~~
~~increasing or decreasing the transmission power of these base stations in accordance with~~
~~this information from the mobile terminal relating to excess or deficiency of their transmission~~
~~power.~~

Claim 2 (currently amended): A transmission power control method according to claim 1,
wherein the step of base stations that have a likelihood of transmitting user data are estimated
from the estimated uplink reception qualitydetermining comprises estimating uplink reception
quality of said other base stations.

Claim 3 (currently amended): A transmission power control method according to claim
2, wherein ~~base stations that are estimated to have a likelihood of transmitting user data are base~~
~~stations at which said estimated signal weights are determined for the downlink signals from said~~
~~other base stations based on the uplink reception quality is not good.~~

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

Claim 4 (currently amended): A transmission power control method according to claim 2, wherein said estimating comprises the estimated uplink reception quality is calculated from the calculating a correlation between the-an increase or decrease in transmission power instructed by the-a transmission power control, and the-an increase or decrease in the-transmission power of the-a downlink signal received from a base station that is transmitting user data to the mobile terminal after the first base station is selected.

Claim 5 (currently amended): A transmission power control method according to claim 1, wherein a signal obtained by combining a-weighted downlink signals from the-said other base stations that have a likelihood of transmitting user data is used for deciding to determine whether the transmission power of the other base stations is excessive or insufficient.

Claim 6 (currently amended): A receiving method for demodulating user data in the-a downlink signal from base stations to a mobile terminal in a mobile communications system, comprising the steps of:

during soft handover, sending notification, from the mobile terminal to the base stations, of the ID of the base station that is transmitting the downlink signal with the best downlink reception quality;

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

~~stopping transmission of user data to the mobile terminal from base stations that do not correspond to the base station ID notified by the mobile terminal;~~

~~estimating, at the mobile terminal, which base stations have a likelihood of transmitting user data; and~~

selecting, at the mobile terminal, a first base station, said first base station transmitting user data in a downlink signal having a preferred reception quality,

using the downlink signals from these other base stations not selected by said mobile terminal, said other base stations transmitting user data after the first base station is selected, that have a likelihood of transmitting user data, to demodulate, at the mobile terminal, said user data from said first base station.

Claim 7 (currently amended): A receiving method according to claim 6, wherein said step of using comprises base stations that have a likelihood of transmitting user data are estimated~~determining from the estimated uplink reception quality of said other base stations.~~

Claim 8 (currently amended): A receiving method according to claim 7, wherein ~~base stations that are estimated to have a likelihood of transmitting user data are base stations at which the estimated uplink reception quality is not good~~ signal weights are determined for the downlink signals from said other base stations based on the uplink reception quality.

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

Claim 9 (currently amended): A receiving method according to claim 7, wherein said estimating comprises the estimated uplink reception quality is calculated from the calculating a correlation between the an increase or decrease in transmission power instructed by the a transmission power control, and the an increase or decrease in the transmission power of the a downlink signal received from a base station that is transmitting user data to the mobile terminal after the first base station is selected.

Claim 10 (currently amended): A receiving method according to claim 6, wherein a signal obtained by combining a-weighted downlink signals from the other base stations that have a likelihood of transmitting user data is used for demodulating the user data from said first base station.

Claims 11-17 (canceled).

Claim 18 (currently amended): A mobile terminal that controls the transmission power of the downlink signals from base stations in a mobile communications system, comprising:
base station selecting means for selecting, during soft handover, the a first base station that is transmitting user data said in a downlink signal with the best downlink a preferred

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

reception quality, and for notifying the base stations of the ID of said base station, so as to cause only the selected base station to transmit user data;

downlink signal weight decision means for estimating determining transmission power of downlink signals from other base stations not selected by said mobile terminal, said other base stations transmitting user data in said downlink signals to the mobile terminal after the first base station is selected that have a likelihood of transmitting user data; and

downlink TPC command decision means for using the downlink signals from said other base stations that have a likelihood of transmitting user data, to decide whether the transmission power of these said other base stations is excessive or insufficient, and to instruct an increase or decrease of said transmission power.

Claim 19 (currently amended): A mobile terminal for receiving user data in the downlink signal from base stations in a mobile communications system, comprising:

base station selecting means for selecting, during soft handover, the a first base station that is transmitting said user data in a downlink signal with the best a preferred downlink reception quality, and for notifying the base stations of the ID of said base station, so as to cause only the selected base station to transmit user data;

downlink signal weight decision means for estimating determining transmission power of downlink signals from other base stations not selected by said mobile terminal, said other base

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

stations transmitting user data in said downlink signals to the mobile terminal after the first base station is selected~~that have a likelihood of transmitting user data~~; and

~~data demodulating means for using downlink signals from the said other base stations that have a likelihood of transmitting user data, to demodulate the user data from said first base station.~~

Claim 20 (currently amended): A mobile terminal according to claim 18 or claim 19, wherein said downlink signal weight decision means estimates, ~~from the estimated uplink reception quality of said other base stations, base stations that have a likelihood of transmitting user data.~~

Claim 21 (currently amended): A mobile terminal according to claim 20, wherein ~~a base station that said downlink signal weight decision means estimates as having a likelihood of transmitting user data is a base station at which said estimated signal weights are determined for the downlink signals from said other base stations based on the uplink reception quality is not good.~~

Claim 22 (currently amended): A mobile terminal according to claim 20, wherein the downlink signal weight decision means calculates ~~the an~~ estimated uplink reception quality from

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 10/020,130

~~the-a~~ correlation between ~~the-an~~ increase or decrease in transmission power instructed by ~~the-a~~ transmission power control, and ~~the-an~~ increase or decrease in ~~the~~ power of ~~the-a~~ downlink signal received from a base station that is transmitting user data to the mobile terminal after the first base station is selected.

Claim 23 (currently amended): A mobile terminal according to claim 18, wherein the downlink TPC command decision means uses ~~the-a~~ signal obtained by combining ~~the~~-weighted downlink signals from said ~~estimated base stations~~other base stations to decide whether ~~the~~ transmission power of the other base stations is excessive or insufficient.

Claim 24 (currently amended): A mobile terminal according to claim 19, wherein said data demodulating means uses ~~the-a~~ signal obtained by combining ~~the~~-weighted downlink signals from said ~~estimated~~other base stations to demodulate the user data.